


# YOUR ECOFUTURE

## Air Source Heat Pump Installation Pack

EcoFuture
Renewables for your world

CONSULTING | DESIGNING
IMPLEMENTING | MONITORING

# TABLE OF CONTENTS

1. Contact Information

2. Heat Pump System

3. System Design - Heat Loss

17. System Design - Schematic

18. System Design - Floor Plans

20. Sound Assessment

22. Commissioning Checklist

24. Five Point Check

25. Maintenance Log

26. Maintenance Requirements

26. Guarantees and Warranties

27. Data Sheets

# CONTACT INFORMATION

## INSTALLATION DETAILS

**Client Name:** Ashley Hurst

**Client Address:** 71 Cross Lane, Manchester, M18 8WA

## ADMINISTRATION COMPANY

**Company:** EcoFuture

**Address:** 168A Kells Lane, Low Fell, Gateshead, Tyne and Wear, NE9 5HY

**Phone:** 0191 490 3308

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**General enquiries:** hello@yourecofuture.com

# HEAT PUMP SYSTEM

AIR SOURCE HEAT PUMP




PLANTROOM



# SYSTEM DESIGN

## HEAT LOSS REPORT



# Heat Loss Report

16/07/2025

## Project Reference: Ashley Hurst - Ground Floor Flat

## Heating Type: Air Source Heat Pump

**Installation Address**

71 Cross Lane,
Manchester,
M18 8WA

This report has been completed by jay abley

*The methods used in these calculations are from the Chartered Institution of Building Services Engineers (CIBSE) The Domestic Heating Design Guide and EN 12831. The UK standards for MCS MIS 3005 and MIS 3004 have also been met ensuring heat pumps and Biomass calculations can be presented.*

*It's important for the relevant persons to read this report and notify ecofuture technology of any corrections that need to be made before the heating system is installed. EcoFuture Technology is not liable for any inaccurate calculations made due to incorrect information, therefore it's important that the information provided is to the best knowledge available from the home owner, architect or builder.*

# Heat Loss Report

## Contents

Appendix A Summary of Results

Appendix B Summary of Survey: Room features

Appendix C Summary of survey: Room Dimensions

Appendix D Summary of Survey: Vaulted Rooms

Appendix E Summary of Survey: External, Internal and Party Walls

Appendix F Summary of Survey: Windows and Doors

Appendix G Summary of Survey: Floors, Ceilings and Roof

Appendix H Review of Heat Loss

Appendix I Summary of U values (W/m2K), temperatures and additional heating

Appendix J DHW (Domestic Hot Water)

Appendix K Emitters and Performance

Appendix M Fuel Comparison

Appendix O Proposed Emitters

Appendix A

# Summary of Results

When the external temperature is -2.65°C
The total heat source required to heat the building must provide an output of 2.46 kW

**Heating Type:** Air Source Heat Pump

**Manufacturer:** Vaillant UK

**Model:** aroTHERM Plus 3.5kW

**Output at designed external temperature:** 4.40 kW

**Maximum designed flow temperature:** 45°C

**ASHP=**Air Source Heat Pump

## Worst Performing Room

**Room Name:** Store Room

**Floor Area:** 1.10 m²

**Power demand:** 87.30 watts

**Specific room heat loss:** 79.36 W/m²

**Emitter type:** Standard Radiators

**Seasonal Coefficient of Performance (SCOP):** 3.65

**Temperature Star Rating:** ★★★★

**Calculated Energy using Degree Day Data:** The energy calculation method is worst case scenario, therefore assuming all rooms to be heated to their designed temperatures throughout the heating season. Of course most people don't use all the rooms and don't have the heating on within all rooms throughout a year at maximum. As a result, the calculated energy figure can be overestimated, therefore running costs may be higher with this calculation than actual.

Appendix B

# Room Features

Number of rooms 6 and total floor area 46.70 m²
Location (Degree Day): Manchester,
Ground Temperature 10.00 °C
Outside Temperature -2.65 °C
Degree Day Data 2228
Is property > 2006? YES
If property has thermal bridging NO
Does the building have MVHR NO

| Room Names | Designed Temperature | Fireplace | Throat restriction | Year room was built | Air Changes Per Hour | Exposed Location | Intermitted Heating | Vaulted Ceiling? | Vaulted Ceiling Type | Room Below | Room Above | Emitter Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 21 | NO | NO | 2024 | 1.5 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |
| Bathroom | 22 | NO | NO | 2024 | 1.0 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |
| Hall | 21 | NO | NO | 2024 | 0.5 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |
| Bedroom | 21 | NO | NO | 2024 | 0.5 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |
| Store Room | 21 | NO | NO | 2024 | 0.5 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |
| Cupboard | 21 | NO | NO | 2024 | 0.5 | NO | NO | NO | - | None | Room at 18C | Standard Radiators |

Appendix C

# Room Dimensions

| Room Names | Floor Areas m² | Room Height m | External wall(Type A) m | External wall(Type B) m | Window (Type A) m² | Window (Type B) m² | Internal Wall m | Party wall m | External Door Area m² | Roof Glazing Area m² | Lowest Parallel room temp | High ceiling % increase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 21.70 | 2.70 | 16.85 | 0.00 | 3.00 | 0.00 | 4.90 | 0.00 | 0.00 | 0.00 | 18 °C | 0 % |
| Bathroom | 4.40 | 2.70 | 2.20 | 0.00 | 0.60 | 0.00 | 6.40 | 0.00 | 0.00 | 0.00 | 18 °C | 0 % |
| Hall | 4.80 | 2.70 | 1.30 | 0.00 | 0.00 | 0.00 | 8.50 | 0.00 | 1.70 | 0.00 | 18 °C | 0 % |
| Bedroom | 13.00 | 2.70 | 5.30 | 0.00 | 0.70 | 0.00 | 9.50 | 0.00 | 0.00 | 0.00 | 18 °C | 0 % |
| Store Room | 1.10 | 2.70 | 0.79 | 0.00 | 0.00 | 0.00 | 4.20 | 0.00 | 0.00 | 0.00 | 18 °C | 0 % |
| Cupboard | 1.70 | 2.50 | 3.30 | 0.00 | 0.00 | 0.00 | 3.20 | 0.00 | 0.00 | 0.00 | 18 °C | 0 % |

Appendix E

# External, Internal and Party Walls

| Room Names | External Wall (A) | External Wall (B) | Internal Wall | Party Wall |
|---|---|---|---|---|
| Kitchen / Lounge | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |
| Bathroom | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |
| Hall | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |
| Bedroom | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |
| Store Room | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |
| Cupboard | Building Regulations 2021 for new dwelling, External (0.26) | - | Plasterboard with Studding (1.72) | - |

Appendix F

# Windows and Doors

| Room Names | Window Type (A) | Window Type (B) | Roof Glazing | Door |
|---|---|---|---|---|
| Kitchen / Lounge | Current Building Regulations Window Metal frame (2.2) | - | - | - |
| Bathroom | Current Building Regulations Window Metal frame (2.2) | - | - | - |
| Hall | - | - | - | Building Regulations 2021 for new dwelling, Doors including glazed (1.6) |
| Bedroom | Current Building Regulations Window Metal frame (2.2) | - | - | - |
| Store Room | - | - | - | - |
| Cupboard | - | - | - | - |

Appendix G

# Floors, Ceilings and Roof

| Room Names | Floor | Roof or Ceiling |
|---|---|---|
| Kitchen / Lounge | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |
| Bathroom | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |
| Hall | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |
| Bedroom | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |
| Store Room | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |
| Cupboard | Ground Floor Current Building Regulations (0.25) | Intermediate Floor Timber with insulation (0.32) |

Appendix H

# Review of Heat Loss Part 1

| Room Names | W/m² | Floor (watts) | External wall Type A (watts) | External wall Type B (watts) | Window Type A (watts) | Window Type B (watts) | Internal Wall (watts) | Party Wall (watts) | External Door (watts) | Roof Glazing (watts) | Roof or Ceiling (watts) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 57.70 | 59.68 | 261.30 | 0.00 | 156.09 | 0.00 | 68.27 | 0.00 | 0.00 | 0.00 | 20.83 |
| Bathroom | 68.44 | 13.20 | 34.22 | 0.00 | 32.54 | 0.00 | 118.89 | 0.00 | 0.00 | 0.00 | 5.63 |
| Hall | 54.64 | 13.20 | 11.13 | 0.00 | 0.00 | 0.00 | 118.42 | 0.00 | 64.33 | 0.00 | 4.61 |
| Bedroom | 33.67 | 35.75 | 83.69 | 0.00 | 36.42 | 0.00 | 132.35 | 0.00 | 0.00 | 0.00 | 12.48 |
| Store Room | 79.36 | 3.03 | 13.12 | 0.00 | 0.00 | 0.00 | 58.51 | 0.00 | 0.00 | 0.00 | 1.06 |
| Cupboard | 67.59 | 4.68 | 50.73 | 0.00 | 0.00 | 0.00 | 41.28 | 0.00 | 0.00 | 0.00 | 1.63 |

# Review of Heat Loss Part 2

| Room Names | High Ceiling Increase (watts) | Amount of Air Heated per hour (m³/ hour) | Ventilation (watts) | Exposed Location (watts) | Intermitted Heating (watts) | Thermal Bridges (watts) | Total Watts | Total kWh |
|---|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 0.00 | 87.89 | 685.90 | 0.00 | 0.00 | 0.00 | 1,252.06 | 2,784.59 |
| Bathroom | 0.00 | 11.88 | 96.64 | 0.00 | 0.00 | 0.00 | 301.12 | 413.27 |
| Hall | 0.00 | 6.48 | 50.57 | 0.00 | 0.00 | 0.00 | 262.26 | 372.75 |
| Bedroom | 0.00 | 17.55 | 136.97 | 0.00 | 0.00 | 0.00 | 437.66 | 755.03 |
| Store Room | 0.00 | 1.49 | 11.59 | 0.00 | 0.00 | 0.00 | 87.30 | 70.56 |
| Cupboard | 0.00 | 2.13 | 16.58 | 0.00 | 0.00 | 0.00 | 114.90 | 174.92 |

Appendix I

# Summary of U values (W/m²K) Part 1

| Room Names | Floor | External Wall Type A | External Wall Type B | Window Type A | Window Type B | Internal Wall | Party Wall | External Door |
|---|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 0.25 | 0.26 | 0.00 | 2.20 | 0.00 | 1.72 | 0.00 | 0.00 |
| Bathroom | 0.25 | 0.26 | 0.00 | 2.20 | 0.00 | 1.72 | 0.00 | 0.00 |
| Hall | 0.25 | 0.26 | 0.00 | 0.00 | 0.00 | 1.72 | 0.00 | 1.60 |
| Bedroom | 0.25 | 0.26 | 0.00 | 2.20 | 0.00 | 1.72 | 0.00 | 0.00 |
| Store Room | 0.25 | 0.26 | 0.00 | 0.00 | 0.00 | 1.72 | 0.00 | 0.00 |
| Cupboard | 0.25 | 0.26 | 0.00 | 0.00 | 0.00 | 1.72 | 0.00 | 0.00 |

# Summary of U values (W/m²K) Part 2

| Room Names | Roof Glazing | Roof or Ceiling | Exposed Location | Intermitted Heating | Thermal Bridges | Room Temp Below (If none then average Ground temp) | Room Temp Above (through Ceiling or Roof) |
|---|---|---|---|---|---|---|---|
| Kitchen / Lounge | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |
| Bathroom | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |
| Hall | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |
| Bedroom | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |
| Store Room | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |
| Cupboard | 0.00 | 0.32 | 0.00% | 0.00% | 0.00 | 10.00 | 18.00 |

Appendix J

# DHW (Domestic Hot Water)

| | |
|---|---|
| **Number of bedrooms:** | 1 |
| **Number of occupants per bedroom:** | 1 |
| **Flow temperature for hot water (DHW):** | 55°C (55 for heat pump others 70) |
| **Hot water per occupant:** | 45 litres (if heat pump use 45, if other use 35) |
| **η efficiency pipework loss to cylinder:** | 90% |
| **Electricity Cost:** | 21.00 p/kWh |
| **SHC Water:** | 4,187 J/kgK |
| **J to kWh:** | 3,600,000 |
| **water mains input temp:** | 10°C |
| **kg to litres water:** | 1 |
| **Hot water energy demand per day:** | 5.23 kWh |
| **Annual Demand:** | 1,964.90 kWh |
| | 1,981.07 kWh |

Appendix K

# Emitters and Performance

| Room Names | Type of Emitter | Current Emitter watts (70°C) | Flow Temperature °C | W/m² | Room Heat Loss watts | Underfloor Heating Details | | | Likely SCOP | Star Rating |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Floor Type | Floor Surface | Max Pipe Spacing | ASHP | |
| Kitchen / Lounge | Standard Radiators | 0.00 | 45 | 57.70 | 1,252.06 | | | N/A | 3.65 | ★★★★ |
| Bathroom | Standard Radiators | 0.00 | 45 | 68.44 | 301.12 | | | N/A | 3.65 | ★★★★ |
| Hall | Standard Radiators | 0.00 | 45 | 54.64 | 262.26 | | | N/A | 3.65 | ★★★★ |
| Bedroom | Standard Radiators | 0.00 | 45 | 33.67 | 437.66 | | | N/A | 3.65 | ★★★★ |
| Store Room | Standard Radiators | 0.00 | 45 | 79.36 | 87.30 | | | N/A | 3.65 | ★★★★ |
| Cupboard | Standard Radiators | 0.00 | 45 | 67.59 | 114.90 | | | N/A | 3.65 | ★★★★ |

Appendix M

# Fuel Comparison

| Heating Type | Effeciency % | | Annual Energy Demand kWh | | | Number of kWh in unit | Price per unit | Pence per kWh | £ / kWh | Standing Charge | Total annual running cost | C02 emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hot water | Heating | Hot water | Heating | Total | | | | | Pence / day | | factor (kg/ kWh) | Total kg |
| Mains Gas | 85 % | 85 % | 1,981.07 | 4,571.14 | 6,552.21 | 1.00 | 7.9p / kilowatt-hour | 7.9 | 0.08 | - | £608.97 | 0.227 | 1,750 |
| Air Source Heat Pump | 3.1 (SCOP) | 3.65 (SCOP) | 1,910.32 | 4,571.14 | 6,481.45 | 1.00 | 14p / kilowatt-hour | 14 | 0.14 | - | £403.87 | 0.233 | 435 |

## Heat Pump running costs breakdown

| | | Energy kWh | Annual running cost |
|---|---|---|---|
| Heating and Hot Water | Renewable Heat | 4,613 | £ 0 |
| | Energy you pay for | 1,923 | £ 403.87 |

## Method used

| | Energy kWh |
|---|---|
| Heating and Hot Water | 1,869 |
| *Hot Water includes pasteurisation cycle | 55 |
| Total | 1,923 |

Appendix P

# Air Source Heat Pump Summary

## SPACE HEATING

| | |
|---|---|
| Demand: | 4,571.14 kWh/yr |
| Heat supplied by HP, excluding auxiliary heaters: | 4,571.14 kWh/yr |
| SCOP(2): | 3.65 |
| Electricity consumed by HP, excluding auxiliary heaters: | 1,252.37 kWh/yr |
| Renewable heat supplied by HP: | 3,318.77 kWh/yr |
| Remaining heat to be supplied by auxiliary heaters and other heat sources: | 0.00 kWh/yr |
| Remaining heat, supplied by other heat sources: | 0.00 kWh/yr |
| Remaining heat, supplied by auxiliary heaters: | 0.00 kWh/yr |
| Electricity consumed by HP, including auxiliary heaters: | 1,252.37 kWh/yr |

## WHERE OTHER HEAT SOURCES ARE USED

| | |
|---|---|
| Fuel used: | N/A |
| Efficiency of other heat sources: | 0% |
| Consumed by other heat sources: | 0.00 kWh/yr |

## WATER HEATING

| | |
|---|---|
| No. of bedrooms: | 1 Rooms |
| No of occupants / bedroom: | 1 Person/s |
| HP flow temperature in DHW mode: | 55°C |
| Hot water / occupant: | 45 Litres/day |
| Final HP secondary HW temperature: | 50°C |
| Demand: | 1,964.90 kWh/yr |
| Heat supplied by HP, excluding immersion heater: | 1,910.32 kWh/yr |
| SCOP(2): | 3.10 |
| Electricity consumed by HP, excluding immersion heater: | 616.23 kWh/yr |
| Renewable heat supplied by HP: | 1,294.09 kWh/yr |
| Remaining heat to be supplied by immersion heater and other heat sources: | 54.58 kWh/yr |
| Remaining heat, supplied by other heat sources: | 0.00 kWh/yr |
| Remaining heat, supplied by immersion heater: | 54.58 kWh/yr |
| Electricity consumed by HP, including immersion heater: | 670.81 kWh/yr |

## WHERE OTHER HEAT SOURCES ARE USED

| | |
|---|---|
| Fuel used: | N/A |
| Efficiency of other heat sources: | 0% |
| Consumed by other heat sources: | 0.00 kWh/yr |

## PROPORTIONS, ENERGY CONSUMPTION, AND PERFORMANCE

| | |
|---|---|
| Proportion of space heating and water heating demand provided by heat pump (excluding auxiliary): | 100% |
| Renewable heat: | 4,612.86 kWh/yr |
| Electricity consumed by HP (excluding auxiliary/immersion heaters): | 1,868.60 kWh/yr |
| Electricity consumed by auxiliary/immersion heaters (supplied as part of HP): | 54.58 kWh/yr |
| Fuel consumed by other heat sources: | 0.00 kWh/yr |
| HP combined performance SCOP(4): | 3.40 |

## RUNNING COST

| | |
|---|---|
| Cost per unit of electricity for HP: | 21.00 p/kWh |

# Radiator / Emitters

## Proposed Emitters

| Room Temperature | Room Name | Room Heat Loss | Type | Connection Type | Height (mm) | Length (mm) | Custom MWT 42.5°C Output (Watts) | Mean (Flow/Return) Water Temperature and Outputs 35°C Output (Watts) | 40°C Output (Watts) | 45°C Output (Watts) | 50°C Output (Watts) | 55°C Output (Watts) | 60°C Output (Watts) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21°C | Kitchen / Lounge | 1,252.06 | K2 | BOE | 500 | 1600 | 595.80 | 341.11 | 507.35 | 687.39 | 879.12 | 1,081.07 | 1,292.15 |
| | | | K2 | BOE | 600 | 1600 | 887.19 | 507.94 | 755.48 | 1,023.58 | 1,309.07 | 1,609.79 | 1,924.11 |
| | | | | | Total Output (Watts) | | 1,482.99 | 849.05 | 1,262.84 | 1,710.97 | 2,188.19 | 2,690.85 | 3,216.26 |
| 22°C | Bathroom | 301.12 | K2 | BOE | 600 | 600 | 312.72 | 172.98 | 264.08 | 363.18 | 469.01 | 580.69 | 697.58 |
| | | | | | Total Output (Watts) | | 312.72 | 172.98 | 264.08 | 363.18 | 469.01 | 580.69 | 697.58 |
| 21°C | Hall | 262.26 | K2 | BOE | 600 | 600 | 332.70 | 190.48 | 283.31 | 383.84 | 490.90 | 603.67 | 721.54 |
| | | | | | Total Output (Watts) | | 332.70 | 190.48 | 283.31 | 383.84 | 490.90 | 603.67 | 721.54 |
| 21°C | Bedroom | 437.66 | K2 | BOE | 600 | 800 | 443.59 | 253.97 | 377.74 | 511.79 | 654.54 | 804.89 | 962.05 |
| | | | | | Total Output (Watts) | | 443.59 | 253.97 | 377.74 | 511.79 | 654.54 | 804.89 | 962.05 |

**Cost per day for electric standing charge:** 0.00 pence/day

**Cost per unit of fuel for other heat sources:** 0.00 p/kWh

**Cost of electricity for HP (including auxiliary/immersion heaters):** £403.87

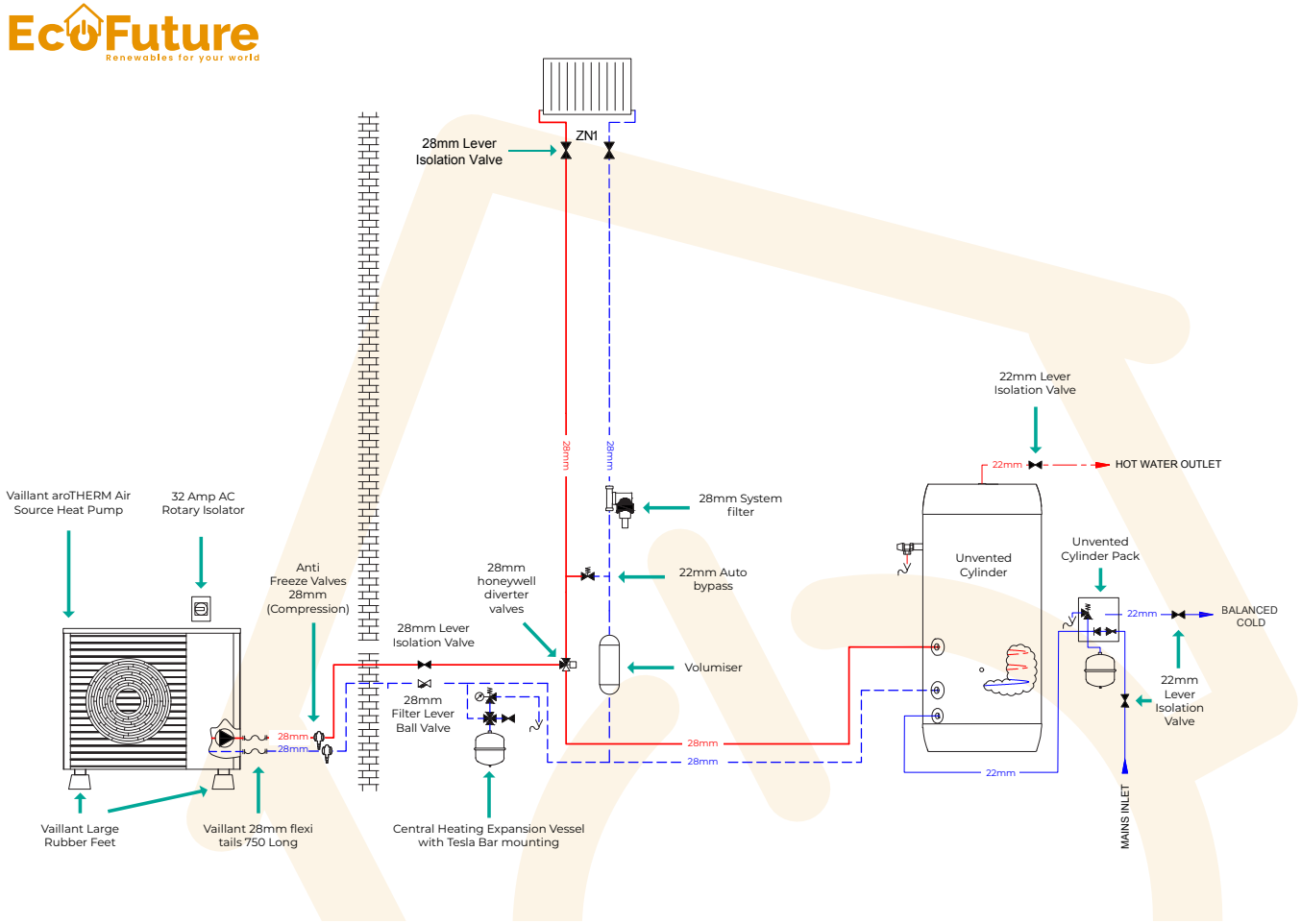
**Cost of fuel for other heat sources:** £0

**Disclaimer:**

"The performance of Microgeneration heat pump systems is impossible to predict with certainty due to the variability of the climate and its subsequent effect on both heat supply and demand. This estimate is based upon the best available information but is given as guidance only and should not be considered as a guarantee."

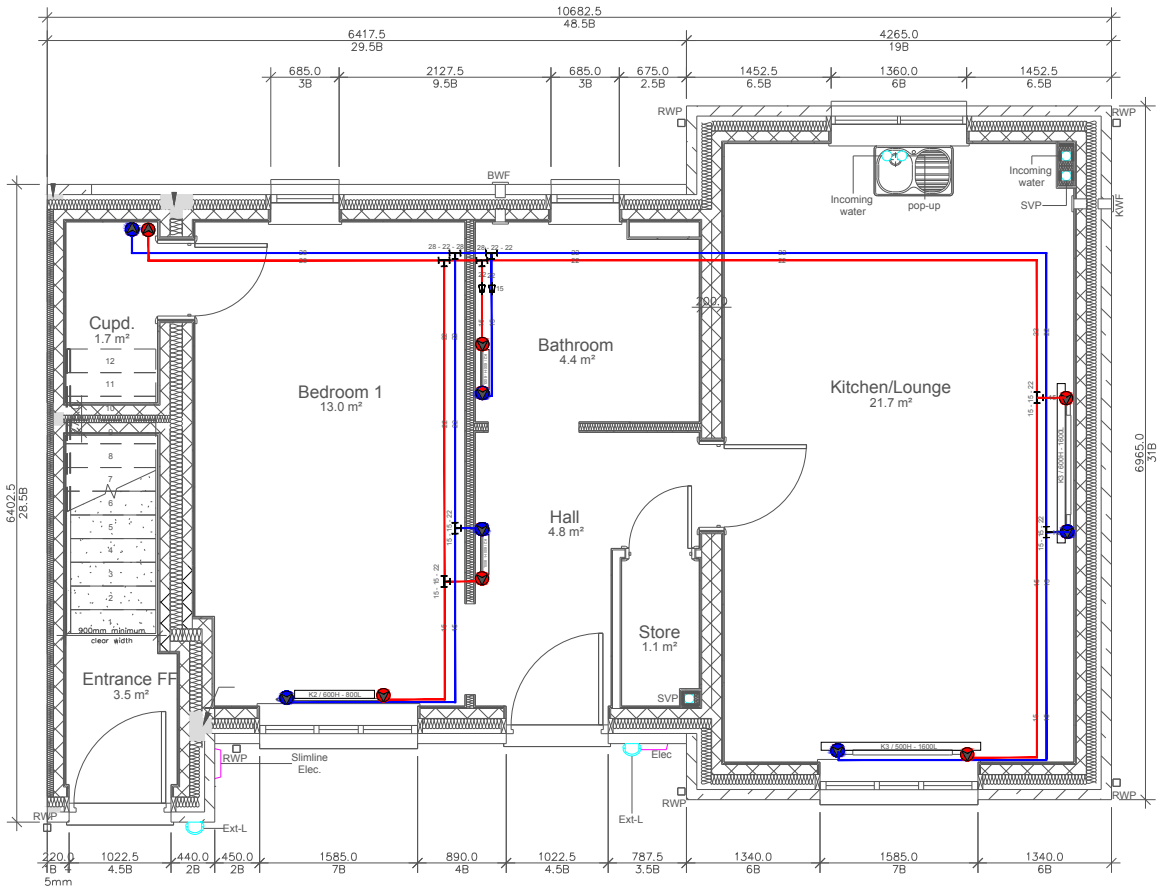
# SYSTEM DESIGN

## SCHEMATIC



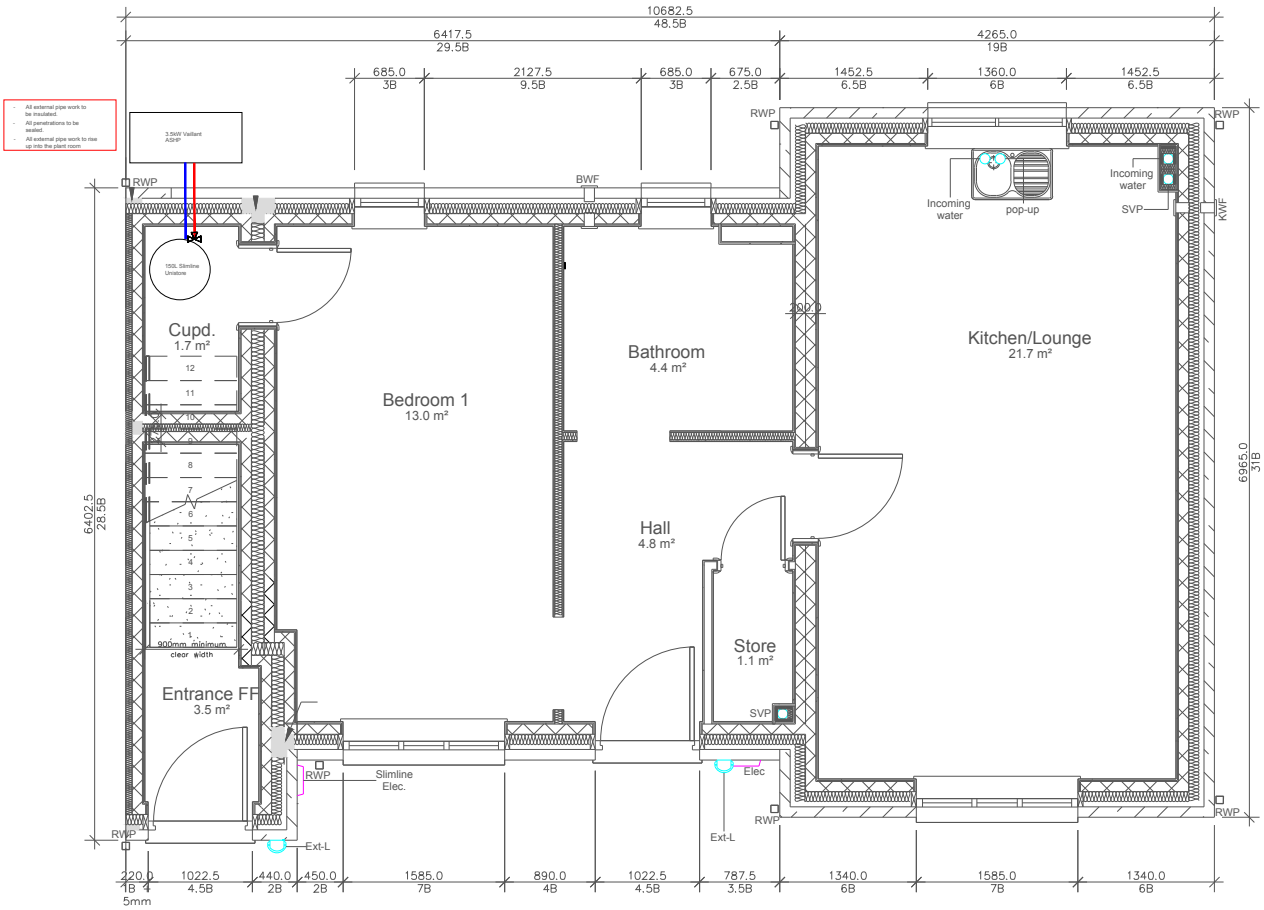
# SYSTEM DESIGN

## PRIMARY CENTRAL HEATING



# SYSTEM DESIGN

## PRIMARY EXTERNAL



# SOUND ASSESSMENT

## MCS 020 - Planning Standards
Noise Assessment Calculations (Air Source Heat Pump)

**EcoFuture**

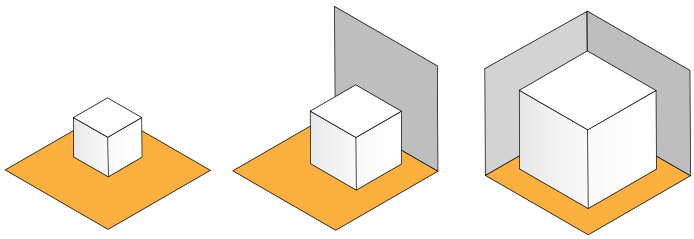
| | | | |
|---|---|---|---|
| Assessment date: | **4 Jul 2025** | Assessment result: | **PASS** |
| MCS Installation company: | **EcoFuture** | | |
| Site Reference: | **71 Cross Lane, Manchester, M18 8WA** | | |
| ASHP Manufacturer: | **Vaillant** | | |
| ASHP Model: | **aroTHERM Plus 3.5kW (VWL 35/6 A 230V S2)** | | |

Assessment position description:

**Assessment position is the first floor bathroom window and it is 3.5 metres away from the air source heat pump**



| | | |
|---|---|---|
| Step 1: | A-Weighted Sound Power Level from manufacturer | 54.0 |
| Step 2: | Determination of directivity (Q) | 8 |
| Step 3: | Distance from heat pump to the assessment position in metres | 3.5 |
| Step 4: | dB distance reduction | -11 |
| Step 5: | dB reduction for any barriers between heat pump and assessment point | -10 |
| Step 6: | Calculated Sound Pressure Level (Step 1 + Step 4 + Step 5) | 33.0 |
| Step 7: | Assumed background noise level | 40 |
| Step 8: | Difference between background noise level and heat pump noise level | 7.0 |
| Step 9: | Final decibel corrected sound level (< or = 42dB = Pass) | 41dB |



Q = 2 Q = 4 Q = 8

| Barriers (Step 5) | |
|---|---|
| Is there a barrier between the heat pump and the assessment point? | |
| A solid barrier (e.g, brick wall or fence) completely obscures the installers vision of the assessment position from the top edge of the ASHP | **-10** |
| A solid barrier completely obscures the installers vision of the assessment position from the top or side edges of the ASHP, but moving a maximum distance of 25cm in any direction of the ASHP allows an assessment position to be seen | **-5** |
| It is possible for the installer to see any part of an assessment position from the top or side of the ASHP | **0** |

| Decibel Correction (Step 9) | |
|---|---|
| Left column values apply to both positive and negative dB values | |
| Difference between the two noise levels (dB) (+/-) | Correction to be added to the higher noise level |
| 0 | **3.0** |
| 1 | **2.5** |
| 2 | **2.1** |
| 3 | **1.8** |
| 4 | **1.5** |
| 5 | **1.2** |
| 6 | **1.0** |
| 7 | **0.8** |
| 8 | **0.6** |
| 9 | **0.5** |
| 10 | **0.4** |
| 11 | **0.3** |
| 12 | **0.3** |
| 13 | **0.2** |
| 14 | **0.2** |
| 15 | **0.1** |

| | dB Distance Reduction (Step 4) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Distance in meters from Heat Pump (Step 3) | | | | | | | | | | | | | |
| | **1** | **1.5** | **2** | **3** | **4** | **5** | **6** | **8** | **10** | **12** | **15** | **20** | **25** | **30** |
| **Q** (step 2) | | | | | | | | | | | | | | |
| **2** | -8 | -11 | -14 | -17 | -20 | -21 | -23 | -26 | -28 | -29 | -31 | -34 | -36 | -37 |
| **4** | -5 | -8 | -11 | -14 | -17 | -19 | -20 | -23 | -25 | -26 | -28 | -31 | -33 | -34 |
| **8** | -2 | -5 | -8 | -11 | -14 | -16 | -17 | -20 | -22 | -23 | -25 | -28 | -30 | -31 |

# COMMISSIONING CHECKLIST

| CUSTOMER DETAILS | |
|---|---|
| Name | Ashley Hurst |
| Address | 71 Cross Lane , Manchester , M18 8NZ |
| Tel No. | 07979 368645 |
| Job Number/ Reference | |
| Email | j.h.plumbing@ntlworld.com |

| APPLIANCE INFORMATION | |
|---|---|
| ASHP/ GSHP/ BLR | ASHP |
| Heat pump Make and Model | Vaillant Arotherm Plus VWL 35/6A |
| Serial No. | 21252000100473801300107437N4 |

| HEATING CHECKLIST | |
|---|---|
| Appliance, clearances, positioning and stability ok | Yes |
| Condense pipework fitted correctly | Yes |
| Heating element fitted inside condense pipework | Yes |
| No visible leaks on pipework | No |
| Glycol frost protection level | N/A |
| Anti freeze valves fitted | Yes |
| PRV termination correct | Yes |
| Filter / strainer position and clear | Yes / Outside next to heatpump |
| Expansion vessel charge | 1.5 |
| System pressure reading | 1.4 |
| Brine pressure reading | N/A |
| Outdoor sensor location and heading | Front of property , heading North |
| Isolation valves fitted to ASHP | Yes |
| Outdoor pipework insulated with 19mm insulation | Yes |
| Diverter valve fitted correctly B to Buffer | Yes |
| Filling loop accessible | Yes |
| Flow rate | 858 |
| Benchmark book completed | Yes |

| CYLINDER CHECKLIST | |
|---|---|
| Heat pump approved cylinder | Yes |
| Model and serial number | Unistor 150 HP , 212436001001923009290105 38N1 |
| Location | Landing cupboard |
| Pipework free of leaks | Yes |
| Immersion wired in and labelled | Yes |
| D1 600mm max from temperature valve to tundish | Yes |
| D2 300mm before elbow or bend | Yes |
| Pressure reducing valve setting | 3.5bar |
| T&PR valves operate and tundish discharges correctly | Yes |
| Benchmark book completed | Yes |
| **MCS & ECOFUTURE REQUIREMENTS** | |
| MCS Certificates | N/A |
| Building Regs certificates | Yes |
| Electrical Certificates - | N/A |
| Benchmark ASHP - photo taken | Yes |
| Benchmark Cylinder - photo taken | Yes |
| All serial numbers obtained - photos taken | Yes |
| Completion of works certificate signed and completed | N/A |
| | |
| **ELECTRICAL CHECKS** | |
| External Rotary isolation switch out of protection zone | Yes |
| Electrical supply single/3 phase | Single |
| Incoming voltage | 240v |
| Ebus cables ≥0.75mm | Yes |
| Isolation switches labelled | Yes |
| Fuse ratings and types ok MCB type C RCD type B | Yes |
| Controls and settings applied and tested | Yes |
| Vaillant gateway connected to customers phone and explained | N/A |
| **Commissioning Engineer Signature:** | Paul Clapham |
| **Date:** | 02/07/25 |

# FIVE POINT CHECK

Please refer to the five point check list below, before reporting any system faults.

1. **CHECK VAILLANT THERMOSTAT**
   FOR ANY SYSTEM NOTIFICATIONS AND BATTERIES

2. **CHECK HEAT PUMP INTERFACE UNIT FOR FAULT CODES**

3. **CHECK SYSTEM PRESSURE**
   IS ABOVE 1 BAR. FOR CENTRAL HEATING SYSTEM AND HEAT PUMP SYSTEM (AS THEY ARE PHYSICALLY SEPARATE)

4. **CHECK ALL ELECTRICAL SWITCHES AND CIRCUIT BREAKERS**
   ON POSITION AND NO BREAKERS TRIPPED

5. **CHECK DEMAND FOR HEATING OR HOT WATER**
   TURN ON HEATING DEMAND FROM APP OR THERMOSTAT



# MAINTENANCE LOG

## HEAT PUMP LOGBOOK

**The following logbook must be maintained for all maintenance procedures carried out on this system.**

| Date | Company | Engineer | Comments / Action Taken |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |

## PLANTROOM / UNVENTED CYLINDER LOG BOOK

| Date | Company | Engineer | Comments / Action Taken |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
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# MAINTENANCE REQUIREMENTS

Your Air Source Heat Pump (ASHP) and unvented cylinder should be maintained and serviced annually to ensure manufactures warranty.

| Activity | Frequency |
|---|---|
| Air Source Heat Pump | **Annually** |
| Unvented Cylinder | **Annually** |
| System Pressure | **Quarterly** |

# GUARANTEES AND WARRANTIES

Your equipment is guaranteed by its manufacturer, but you should contact us in the first instance if anything appears to be operating incorrectly.

| | |
|---|---|
| **Heat pump - Vaillant manufacturer's warranty - parts and labour (Subject to annual servicing)** | **7 Years** |
| **Vaillant Controls** | **2 Years** |
| **Hot water cylinder - Vaillant manufacturer's warranty - cylinder shell (Subject to annual servicing)** | **25 Years** |
| **Hot water cylinder - Vaillant manufacturer's warranty - parts and labour (Subject to annual servicing)** | **2 Years** |
| **Workmanship Warranty** | **2 Years** |

# Technical specifications

| aroTHERM plus | Unit | 3.5kW VWL 35 / 6 | 5kW VWL 55 / 6 | 7kW VWL 75 / 6 | 10kW VWL 105 / 6 | 12kW VWL 125 / 6 |
|---|---|---|---|---|---|---|
| **General** | | | | | | |
| Width | mm | 1,100 | | | | |
| Height | mm | 765 | | 965 | 1,565 | |
| Depth | mm | 450 | | | | |
| Weight, ready for operation | kg | 114 | | 128 | 194 | |
| Connection, heating circuit | | G 1 1/4" | | | | |
| Rated voltage | V | 230 V (+10%/- 15%), 50 Hz, 1~/N/PE | | | | |
| Rated current, maximum | A | 14.3 | | 15.0 | 23.3 | |
| Fuse size | | 16 | | | 25 | |
| Fuse type | A | C/D | | | | |
| RCD type | | A | | | | |
| eBUS (2-core communication cable) | mm2 | 0.75 | | | | |
| Maximum length eBUS cable (communication cable) | m | 50 | | | | |
| IP rating | | IP 15 B | | | | |
| Fan, power consumption | W | 40 | | | 50 | |
| Fan quantity | | 1 | | | 2 | |
| Fan, air flow , maximum | $m^3$ /h | 2,300 | | | 5,100 | |
| Heating pump, power consumption | W | 2 - 50 | | | 3 - 87 | |
| **Heating circuit** | | | | | | |
| Heating water temperature, minimum/maximum | ° C | 20 - 75 | | | | |
| Basic length of the heating water pipe, maximum, between the outdoor unit and indoor unit | m | 20 | | | | |
| Operating pressure, minimum | bar | 0.50 | | | | |
| Operating pressure, maximum | bar | 3.00 | | | | |
| Volume flow, minimum | l/h | 400 | | 540 | 995 | |
| Volume flow, maximum | l/h | 860 | | 1,205 | 2,065 | |
| Water volume, in the outdoor unit | l | 1.5 | | 2.0 | 2.5 | |
| Water volume, in the heating circuit, minimum, thawing mode, activated/deactivated back-up heater | l | 15 / 40 | | 20 / 55 | 45 / 150 | |
| Remaining feed pressure, hydraulic | kPa (mbar) | 56.0 (560.0) | | 44.0 (440.0) | 55.0 (550.0) | |

| aroTHERM plus | Unit | 3.5kW VWL 35 / 6 | 5kW VWL 55 / 6 | 7kW VWL 75 / 6 | 10kW VWL 105 / 6 | 12kW VWL 125 / 6 |
|---|---|---|---|---|---|---|
| **Refrigerant circuit** | | | | | | |
| Fluid type | | R290 | | | | |
| Fluid fill quantity | kg | 0.6 | | 0.9 | 1.3 | |
| Refrigerant, Global Warming Potential (GWP) | | 3 | | | | |
| $CO_2$ equivalent | t | 0.0018 | | 0.0027 | 0.0039 | |
| Permissable operating pressure | bar | 31.5 | | | | |
| Compressor type | | Rotary piston | | | Scroll compressor | |
| Compressor oil type | | Specific polyalkylene glycol (PAG | | | | |
| Compressor, control | | Electronic | | | | |

| Noise emissions, heating mode | | | | | | |
|---|---|---|---|---|---|---|
| Sound power, EN 12102, EN 14511 LWA, A7/W35 | dB(A) | 51 | | 53 | 58 | |
| Sound power, EN 12102, EN 14511 LWA, A7/W45 | dB(A) | 53 | | | 58 | |
| Sound power, EN 12102, EN 14511 LWA, A7/W55 | dB(A) | 54 | | 55 | 60 | |

| Efficiency | | |
|---|---|---|
| Energy efficiency class 35°C | (A+++ to F) | A+++ |
| Energy efficiency class 55°C | (A+++ to F) | A++ |
| **Combination with uniTOWER** | | |
| Energy efficiency class | (A+++ to F) | A++ |
| Energy efficiency class for hot water supply | (A+ to F) | A |

| uniTOWER | Unit | VIH QW 190 / 6 |
|---|---|---|
| Total storage cylinder capacity | l | 188 |
| Temperature hot water (max. – with auxiliary heating) | °C | 55 - 75 |
| Dimensions, unpacked (height/width/depth) | mm | 1880 x 599 x 693 |
| Weight, unpacked | kg | 175 |
| Auxiliary electric heater | kW | 6kW (230V/50Hz) / 9kW (400V/50Hz) |

| Hydraulic station | Unit | VWZ MEH 97 |
|---|---|---|
| Dimensions, unpacked (height/width/depth) | mm | 720 x 440 x 350 |
| Weight, unpacked | kg | 15 |
| Power electric backup heater | kW | 6 kW (230V/50Hz) / 9 kW (400V/50Hz) |

| Description | Article number |
|---|---|
| **aroTHERM plus with heat pump interface** | |
| aroTHERM plus 3.5kW - VWL 35 / 6 | 0010037211 |
| aroTHERM plus 5kW - VWL 55 / 6 | 0010037212 |
| aroTHERM plus 7kW - VWL 75 / 6 | 0010037213 |
| aroTHERM plus 10kW - VWL 105 / 6 | 0010037214 |
| aroTHERM plus 12kW - VWL 125 / 6 | 0010037215 |
| **aroTHERM plus with hydraulic module** | |
| aroTHERM plus 3.5kW - VWL 35 / 6 | 0010037206 |
| aroTHERM plus 5kW - VWL 55 / 6 | 0010037207 |
| aroTHERM plus 7kW - VWL 75 / 6 | 0010037208 |
| aroTHERM plus 10kW - VWL 105 / 6 | 0010037209 |
| aroTHERM plus 12kW - VWL 125 / 6 | 0010037210 |
| **aroTHERM plus with uniTOWER** | |
| aroTHERM plus 3.5kW - VWL 35 / 6 | 0010037201 |
| aroTHERM plus 5kW - VWL 55 / 6 | 0010037202 |
| aroTHERM plus 7kW - VWL 75 / 6 | 0010037203 |
| aroTHERM plus 10kW - VWL 105 / 6 | 0010037204 |
| aroTHERM plus 12kW - VWL 125 / 6 | 0010037205 |

## Compatible with



uniSTOR



sensoCOMFORT



VRC 700

| Accessories | Article number |
|---|---|
| aroTHERM connection kit for ground install | 0010027971 |
| aroTHERM connection kit for ground install extension | 0010027972 |
| aroTHERM connection kit for wall install | 0010027974 |
| aroTHERM straight pipe connection kit | 0010027976 |
| 750mm flexihose for air-to-water heat pump (pair) | 0020165288 |
| Snow Spacer | 0010027984 |
| Wall bracket for insulated wall | 0020250224 |
| Wall bracket for non-insulated wall | 0020250225 |
| Anti-vibration feet large | 0020250226 |
| Anti-vibration rubber feet small | 0020252091 |
| Coding resistor active cooling | 0020269259 |
| Discharge vessel | 0020145563 |
| aroTHERM 45 litre buffer | 0010038365 |
| aroTHERM heat exchanger module | 0020222285 |
| aroTHERM inline 6kW back-up heater | 0020222286 |
| VR 10 temperature sensor | 306787 |
| WH40 low-loss header (flow rates up to 3,000 litres per hour) | 306720 |
| WH95 low-loss header (flow rates up to 8,000 litres per hour) | 306721 |
| VR 32/B eBUS coupler (includes housing) | 0020235465 |
| VR 32 eBUS coupler | 0020139895 |
| Ball filter valve 28mm | 0010038133 |
| **uniTOWER accessories** | |
| uniTOWER decoupling module (small) for 3.5 - 7kW model | 0010027982 |
| uniTOWER decoupling module (large) for 10 and 12kW model | 0010027973 |
| uniTOWER 1" adapter connection kit | 0020269275 |
| 18l Buffer cylinder for uniTOWER | 0020269273 |
| uniTOWER multi-zone kit - 1 direct zone | 0020170507 |
| uniTOWER extension set - 2 direct zones | 0020170509 |
| uniTOWER extension set - 1 mixed zone | 0020170508 |
| Circulation set without pump | 0020170502 |
| Circulation set with pump | 0020170503 |
| 2l brine expansion vessel | 0010030975 |

Vaillant
ADVANCE

Mr Ashley Hurst
71
Cross Lane
Manchester
England
M18 8WA

24/07/2025

Dear Mr Hurst,

Congratulations on your Vaillant uniSTOR Heat Pump Cylinder 150 litre Pre-Plumbed purchase (Serial Number: 21244100100192300929012110N8)

We are pleased to advise that you have successfully registered a guarantee for your new product at 71, Cross Lane, Manchester, England, M18 8WA.

Your guarantee includes the following:

2 year standard guarantee including parts and labour (2 year Components and 25 year Shell) from 21/07/2025 - 20/07/2027

The terms and conditions applicable for the guarantee period only are as shown overleaf.

In the event of a breakdown it is advisable to contact your installer to confirm that there is an appliance fault or alternatively, you can contact us on 0330 100 7681 quoting your full address. Lines are open 7 days a week except Christmas Day.

Your Vaillant product must be serviced annually by a fully qualified BPEC and preferable MCS certificated Engineer in accordance with the manufacturer's instructions. Service details must be recorded in the Benchmark logbook. Please note that the cost of the annual service is not included in the guarantee period.

If your installer does not provide an annual service agreement, you can call Vaillant to service your product on 0330 100 7681 where one of our dedicated service staff will be happy to assist you further.

You can also book a service visit online at www.vaillant.co.uk/homeowners/repairs-servicing

Thank you for choosing a Vaillant uniSTOR Heat Pump Cylinder 150 litre Pre-Plumbed.

Yours sincerely

Vaillant Group Service

**Vaillant Group UK Ltd**
Nottingham Road
Belper
Derbyshire DE56 1JT
**T** 0330 678 0878 **W** www.vaillant.co.uk

Registered office Nottingham Road, Belper, Derbyshire DE56 1JT. Registered in England No. 294316
Gas Safe Register is a registered trade mark of the HSE and is used under licence

**Vaillant Group UK Limited ("Vaillant") Guarantee Terms and Conditions**

**To receive the full benefits of the guarantee the following terms and conditions must be followed or your claim may be rejected.**

**If your installer advises you of a heat pump fault, please contact Vaillant Group Service on 0330 100 3540.**

1. The installation of your heat pump must be carried out by a suitably competent engineer with relevant valid certification.
2. The heat pump must be installed fully in accordance with the installation manual and these terms and conditions as well as all prevailing building control regulations and local regulations.
3. The Benchmark logbook must be completed by the installer at the point of installation and retained on site for inspection during an engineer's visit.
4. The guarantee will commence from the date of installation. To validate this Vaillant will require proof of purchase – i.e. an invoice or completed Benchmark logbook, without which the guarantee will commence from the date of manufacture, as shown on the heat pump data plate.
5. Please ensure that you register your heat pump with us within 30 days of it being installed, by providing us with the full 28-digit serial number of the heat pump and any other details that we reasonably require from you. Failure to register within this time period will result in the guarantee reverting to 12 months from the date of installation, provided that your Benchmark logbook has been completed in accordance with these terms and conditions. If your Benchmark logbook has not been completed in accordance with these terms and conditions, the guarantee will revert to 12 months from the date of manufacture of the heat pump. To register your guarantee and for further details go to our website at: www.vaillant.co.uk.
6. The heat pump should be serviced annually by either the Vaillant Service organisation or other suitably competent engineer with relevant valid certification in accordance with the manufacturer's instructions. If the heat pump has not been serviced annually the heat pump guarantee will become invalid.
7. The guarantee will cover all major components of the heat pump against manufacturing defects from the installation date, provided that the heat pump is not beyond economic repair. If the heat pump is beyond economic repair, the guarantee will not cover the replacement of such components.
8. If any spare parts are used as part of the services under the guarantee, those spare parts will be guaranteed for a period of 12 months (against defective material/faulty workmanship) and shall be replaced free of charge. Please note that the guarantee on any replacement parts does not extend the duration of the guarantee beyond the original term.
9. Invoices for attendance and repair of this heat pump by third parties will not be accepted for payment unless preauthorised in writing by Vaillant.
10. If a failure of the heat pump is caused by contaminated water or contaminated glycol in the system, this may result in the engineer's visit becoming chargeable.
11. Moving the heat pump to another property without our written consent may invalidate the guarantee.
12. Please ensure that:

    - your system has been flushed prior to heat pump installation, to ensure that there are no contaminates;
    - the water circulating within the heat pump is checked for hardness and salinity and correctly and fully inhibited prior to the installation of the heat pump;
    - the water circulating in the heat pump is maintained in a clean condition and kept correctly inhibited throughout the heat pump's life cycle;
    - relevant frost protection measures are in place (e.g. glycol, anti-frost valves); and
    - your heat pump is serviced each calendar year. The cost of the annual service is not included in the guarantee and service details must be recorded in the Benchmark logbook and made available for inspection during any engineer's visit.

13. The guarantee does not include cover for fair wear and tear, wilful damage, abnormal storage or working conditions, accidental damage or negligence by you or by any third party and failure by you or any third party to operate or use the heat pump in accordance with the operating instructions.
14. The guarantee does not cover installation in mobile leisure accommodation vehicles – i.e. boats, caravans etc.
15. The guarantee does not cover consequential losses relating to any other costs or expenses caused by or arising as a result of the breakdown of the heat pump.
16. All installation related, non-heat pump or external system fault calls may result in the engineer's visit becoming chargeable.
17. Health and safety is paramount to us and if our engineers cannot gain safe access to the heat pump or an engineer cannot gain access to the property then our abortive charge may apply.
18. You may be required to pay a refundable deposit in respect of an engineer's visit, which will be returned in full if the diagnosed fault is covered by the guarantee.
19. This guarantee is in addition to, and does not affect, your statutory rights in relation to any product that is faulty or not as described. More information on your statutory rights can be obtained from Citizen's Advice at https://www.citizensadvice.org.uk/.
20. The use of any non-genuine Vaillant spare parts in any repair may invalidate the guarantee.
21. In registering the guarantee please note that Vaillant will share your personal data with its business partners in order to assist with the administration of the guarantee.
22. The guarantee is provided to you by Vaillant Group UK Limited, (registered in England with Company Registration No. 00294316) of Nottingham Road, Belper, Derbyshire, DE56 1JT. Should your heat pump develop a fault please contact your original installer or alternatively contact Vaillant Group Service on 0330 100 3540.
23. The guarantee is valid for installation in domestic dwellings in the United Kingdom and the Republic of Ireland, Isle of Man and Channel Islands.
24. The terms of this guarantee are subject to the laws of England and Wales and any dispute arising from this guarantee shall be decided under those laws and before a court or tribunal in England.

**Renewables Department**
Vaillant Group U.K Ltd
Ddi:+44 (0)330 100 3540 Fax: +44 (0) 1773 525946 e-mail: aftersales-uk@vaillant-group.com
Vaillant Group U.K.- Nottingham Rd - Belper - DE56 1JT

Mr Ashley Hurst
71
Cross Lane
Manchester
England
M18 8WA

24/07/2025

Dear Mr Hurst,

Congratulations on your Vaillant aroTHERM plus 3.5 kW purchase (Serial Number: 212514001004738013001069 32N0)

We are pleased to advise that you have successfully registered a guarantee for your new product at 71, Cross Lane, Manchester, England, M18 8WA.

Your guarantee includes the following:

7 year guarantee including parts and labour from 21/07/2025 - 20/07/2032

The terms and conditions applicable for the guarantee period only are as shown overleaf.

In the event of a breakdown it is advisable to contact your installer to confirm that there is an appliance fault or alternatively, you can contact us on 0330 100 7681 quoting your full address. Lines are open 7 days a week except Christmas Day.

Your Vaillant product must be serviced annually by a fully qualified BPEC and preferable MCS certificated Engineer in accordance with the manufacturer's instructions. Service details must be recorded in the Benchmark logbook. Please note that the cost of the annual service is not included in the guarantee period.

If your installer does not provide an annual service agreement, you can call Vaillant to service your product on 0330 100 7681 where one of our dedicated service staff will be happy to assist you further.

You can also book a service visit online at www.vaillant.co.uk/homeowners/repairs-servicing

Thank you for choosing a Vaillant aroTHERM plus 3.5 kW.

Yours sincerely

Vaillant Group Service

**Vaillant Group UK Ltd**
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Derbyshire DE56 1JT
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**If your installer advises you of a heat pump fault, please contact Vaillant Group Service on 0330 100 3540.**

1. The installation of your heat pump must be carried out by a suitably competent engineer with relevant valid certification.
2. The heat pump must be installed fully in accordance with the installation manual and these terms and conditions as well as all prevailing building control regulations and local regulations.
3. The Benchmark logbook must be completed by the installer at the point of installation and retained on site for inspection during an engineer's visit.
4. The guarantee will commence from the date of installation. To validate this Vaillant will require proof of purchase – i.e. an invoice or completed Benchmark logbook, without which the guarantee will commence from the date of manufacture, as shown on the heat pump data plate.
5. Please ensure that you register your heat pump with us within 30 days of it being installed, by providing us with the full 28-digit serial number of the heat pump and any other details that we reasonably require from you. Failure to register within this time period will result in the guarantee reverting to 12 months from the date of installation, provided that your Benchmark logbook has been completed in accordance with these terms and conditions. If your Benchmark logbook has not been completed in accordance with these terms and conditions, the guarantee will revert to 12 months from the date of manufacture of the heat pump. To register your guarantee and for further details go to our website at: www.vaillant.co.uk.
6. The heat pump should be serviced annually by either the Vaillant Service organisation or other suitably competent engineer with relevant valid certification in accordance with the manufacturer's instructions. If the heat pump has not been serviced annually the heat pump guarantee will become invalid.
7. The guarantee will cover all major components of the heat pump against manufacturing defects from the installation date, provided that the heat pump is not beyond economic repair. If the heat pump is beyond economic repair, the guarantee will not cover the replacement of such components.
8. If any spare parts are used as part of the services under the guarantee, those spare parts will be guaranteed for a period of 12 months (against defective material/faulty workmanship) and shall be replaced free of charge. Please note that the guarantee on any replacement parts does not extend the duration of the guarantee beyond the original term.
9. Invoices for attendance and repair of this heat pump by third parties will not be accepted for payment unless preauthorised in writing by Vaillant.
10. If a failure of the heat pump is caused by contaminated water or contaminated glycol in the system, this may result in the engineer's visit becoming chargeable.
11. Moving the heat pump to another property without our written consent may invalidate the guarantee.
12. Please ensure that:

    - your system has been flushed prior to heat pump installation, to ensure that there are no contaminates;
    - the water circulating within the heat pump is checked for hardness and salinity and correctly and fully inhibited prior to the installation of the heat pump;
    - the water circulating in the heat pump is maintained in a clean condition and kept correctly inhibited throughout the heat pump's life cycle;
    - relevant frost protection measures are in place (e.g. glycol, anti-frost valves); and
    - your heat pump is serviced each calendar year. The cost of the annual service is not included in the guarantee and service details must be recorded in the Benchmark logbook and made available for inspection during any engineer's visit.

13. The guarantee does not include cover for fair wear and tear, wilful damage, abnormal storage or working conditions, accidental damage or negligence by you or by any third party and failure by you or any third party to operate or use the heat pump in accordance with the operating instructions.
14. The guarantee does not cover installation in mobile leisure accommodation vehicles – i.e. boats, caravans etc.
15. The guarantee does not cover consequential losses relating to any other costs or expenses caused by or arising as a result of the breakdown of the heat pump.
16. All installation related, non-heat pump or external system fault calls may result in the engineer's visit becoming chargeable.
17. Health and safety is paramount to us and if our engineers cannot gain safe access to the heat pump or an engineer cannot gain access to the property then our abortive charge may apply.
18. You may be required to pay a refundable deposit in respect of an engineer's visit, which will be returned in full if the diagnosed fault is covered by the guarantee.
19. This guarantee is in addition to, and does not affect, your statutory rights in relation to any product that is faulty or not as described. More information on your statutory rights can be obtained from Citizen's Advice at https://www.citizensadvice.org.uk/.
20. The use of any non-genuine Vaillant spare parts in any repair may invalidate the guarantee.
21. In registering the guarantee please note that Vaillant will share your personal data with its business partners in order to assist with the administration of the guarantee.
22. The guarantee is provided to you by Vaillant Group UK Limited, (registered in England with Company Registration No. 00294316) of Nottingham Road, Belper, Derbyshire, DE56 1JT. Should your heat pump develop a fault please contact your original installer or alternatively contact Vaillant Group Service on 0330 100 3540.
23. The guarantee is valid for installation in domestic dwellings in the United Kingdom and the Republic of Ireland, Isle of Man and Channel Islands.
24. The terms of this guarantee are subject to the laws of England and Wales and any dispute arising from this guarantee shall be decided under those laws and before a court or tribunal in England.

**Renewables Department**
Vaillant Group U.K Ltd
Ddi:+44 (0)330 100 3540 Fax: +44 (0) 1773 525946 e-mail: aftersales-uk@vaillant-group.com
Vaillant Group U.K.- Nottingham Rd - Belper - DE56 1JT

**Terms and Conditions for Boiler Guarantee extension**

Products Covered: ecoTEC exclusive (green iQ): 800 series combination boilers and 627 system boiler ecoTEC plus: 800 series combination boilers, 600 series system boilers, 400 series open vented boilers

**To receive the benefit of the boiler guarantee extension to 10 years the following terms and conditions must be followed or any claim against the guarantee will be rejected. These terms and conditions are in addition to the Vaillant standard terms and conditions as found on the Vaillant website: www.vaillant.co.uk.**

• A Vaillant boiler protection kit (part number 0020278309 or part number 0020278310) must be used, and the following installation and servicing steps conducted in full:
• The heating system filter should be installed in the heating system pipework in line with the filterinstallation instructions enclosed in the pack.
• The heating system must be flushed, cleansed and inhibited in accordance with BS7593.
• In all instances a suitable corrosion inhibitor must be introduced into the clean primary water system as described in the manufacturer's instructions.
• It is essential that the pH level is as per manufacturer's instructions at all times– a litmus test kit is provided to confirm this and results must be noted in the relevant section below and upon yearly service in the comments section of the Benchmark logbook.
• The cleanliness of the heating system should be confirmed by use of a turbidity tube.
• The appliance and the system need to be serviced annually. The service process must be as described within the installation and maintenance instructions of the boiler and the Boiler Protection Kit.
• The effectiveness or strength of the inhibitor and consequent cleanliness of the heating system must checked every 2 years, action taken as appropriate, and noted in the Benchmark logbook.
• The boiler extended guarantee must be registered by an Advance Loyalty Club registered installer within 30 days of installing the appliance, together with the Boiler Protection Kit on the Advance Loyalty Club website or via the App.
• Failure to register within this time period will result in the guarantee reverting to standard Advance Loyalty Club guarantee levels.
• To register you must provide the full 28 digit serial number of the appliance and the full 28 digit serial number of the Boiler Protection Kit. The boiler serial number is clearly shown on the: boiler packaging, appliance data plate, removable stickers attached to the top of the boiler and the back of the control box.
• The boiler protection kit serial number is clearly shown on the product packaging.
• The extended guarantee will cover material and labour charges to repair or replace components within the boiler against manufacturing defects from the installation date, provided this is carried out by Vaillant or a Vaillant authorised Gas Safe registered engineer.
• Invoices for attendance and repair by third parties will not be accepted for payment by Vaillant.
• When claiming on the guarantee the following will be requested:
1. Proof of the date of installation
2. Proof that the appliance was correctly commissioned (completed Benchmark logbook, signed by the commissioning engineer)
3. Proof that the annual service has been completed to manufacturer's requirements.

# Building Regulations Compliance Certificate

NAPIT has notified your local authority Building Control of the work detailed on this certificate. The Installer (named below) confirms that the work completed at the address shown below complies with parts 4 & 7 of the Building Regulations

*Certificate Delivery Address*

Mr Ashley Hurst
71 Cross Lane
MANCHESTER
M18 8WA

*Installation Address*

71 Cross Lane
MANCHESTER
Greater Manchester
M18 8NY

**Schedule of Work:**

| Item | Qty | Item | Qty |
|---|---|---|---|
| Install an unvented hot water storage vessel - House Dwelling | 1 | Install one or more new circuits - House Dwelling | 1 |

| | |
|---|---|
| Certificate Number: | 4521583 |
| Completion Date: | 24/07/2025 |
| Membership Number: | 66000 |
| Installer Name: | EcoFuture Technology Limited |

This certificate is issued by NAPIT Registration Ltd on behalf of the named installation company in accordance with Regulation 20 of the Building Regulations. Regulation 20(5) states that a certificate given in accordance with this regulation shall be evidence (but not conclusive evidence) that the requirements specified in the certificate have been complied with.

# Information for the Householder

Authorised by the Department for Communities and Local Government, NAPIT Registration Limited (NAPIT) provides Competent Persons Registration Schemes for installers who meet the standards of work and competencies within their technical area.

As an approved member of NAPIT, your installer confirms that the installation detailed overleaf complies with parts 4 & 7 of the Building Regulations. You should be aware that not all work is required to be certificated and hence this certificate may only comprise some of the work undertaken for you. If the work you have had done is electrical you should also be provided with an Electrical Installation Certificate as required by the Wiring Regulations (BS7671).

If you are unsure about the quality or suitability of work carried out by your installer, you should, in the first instance attempt to resolve the issue with them. If the issue cannot be resolved with your installer and you wish to make an official complaint, please contact the NAPIT Customer Services department in writing. Further details relating to complaints can be found on the NAPIT website (see www.napit.org.uk).

In the event that the installer is no longer trading and work is found to be non-compliant with the Building Regulations, the following protections are in place for work in dwellings:

1. Microgeneration work will have been subject to a warranty required by the Renewable Energy Consumer Code (see www.recc.org.uk)

2. Work done under Green Deal financing will have been subject to guarantees as required by the Green Deal Code of Practice. (see http://gdorb.decc.gov.uk)

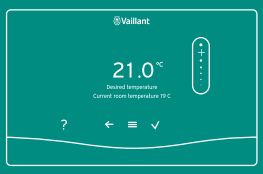
3. Work not covered by items 1 and 2 above, or any other policy put in place by the installer, is subject to the NAPIT Work Quality Guarantee. Under this guarantee, NAPIT will correct non-compliance with the Building Regulations for a period of up to six years from the date of installation (or the period of a product manufacturer's guarantee if this is shorter); provided work was carried out under contract and has been correctly notified to NAPIT. Terms and conditions apply (see www.napit.org.uk).

This Certificate remains the property of NAPIT and must be retained as evidence of compliance with the Building Regulations. In the event of the property being sold or ownership being transferred, please transfer this certificate to the new owner.

Heating Hot water Renewables

# sensoCOMFORT

## Basic Operating Instructions







Vaillant




# Key Product Facts

- Weather compensating
- Intuitive interface
- Energy dashboard
- Control multiple heating circuits
- Time programme assistant
- App controlled (with the sensoNET internet gateway)
- Available wired or wireless
- Features a help button to guide you through the control

## Setting the time and date

- Press the menu button 5 twice
- Use the scroll bar 2 to locate the settings menu
- Press the tick 4 button to select settings
- Then scroll to Language, Time and Display
- Set the correct date using the scroll bar and press
- Now select the time using the same step above

## Setting up the weekly planner

- Press the menu button followed by the control button
- Select Zone you want to setup the programme for
- Select heating and weekly planner to setup
- Within here you can see when the heating is scheduled to turn on

## Holiday mode

- Press the menu button
- Go to control and select absence
- Select the zone you want to set to away
- Input the time and date that you leave and return, with the scroll bar. During this time, the set back temperature will be set and not fall below this whilst you're away

## Setting your time programmes

- Press the menu button followed by the help button 3
- Scroll and select Time Programme Assistant
- You will first be asked for your desired temperature
- You will then be asked a series of questions to generate a heating schedule

## Temperature override

- Press the menu button
- Using the scroll bar, simply slide or tap to the desired temperature
- Select for how long you would like the override to set for
- If you ever want to remove the override, select the back button 6

## Lock feature

- To prevent the control from being used, press the lock button 1 on top of the controller
- To deactivate the lock, press the button twice.
- For the wired controller, if you press and hold the button for a few seconds, this will perform a controller restart, without clearing any parameters. (if the controller has frozen for example)
- For the wireless controller, if you press and hold the lock button, this will start pairing mode with the receiver to link them together




Vaillant

Heating Hot water Renewables

Vaillant Group UK Ltd
Nottingham Road
Belper, Derbyshire
DE56 1JT

**www.vaillant.co.uk**

### Follow Vaillant UK on

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## Useful contacts

### Technical Enquiries

For technical assistance and renewable service:

Telephone: **0330 100 3540**

Email: **aftersales@vaillant.co.uk**

Fault codes can be found in the user manual and can be addressed with Vaillant's Technical team.

### General Enquiries

If you have a general enquiry our friendly reception staff will happily point you in the right direction:

Telephone: **0345 602 2922**




# EcoFuture

Renewables for your world

**T:** 0191 490 3308
**E:** hello@yourecofuture.com

**www.yourecofuture.com**

SOLAR PV | HEAT PUMPS | BATTERY STORAGE | EV CHARGING | MVHR